ELECTRIFICATION OF AN ISLAND BY COMBINING PV, BATTERIES AND DIESEL, ST EUSTATIUS, NL ANTILLES

inter solar award 2016 WINNER

The island of St. Eustatius, located in the caribbean is fully powered by diesel generator. By integrating 1,9 MWp of PV power and 1 MW of batteries with SMA's fuel save controller, the island is able to reduce its fossile fuel consumption by almost 30%. Currently PV+battery penetration as high as 88% has been observed

An expansion of the existing system is already planed and shall be installed in 2017.

Project

- Location: St. Eustatius, NL Antilles
- Commissioning: February 2016

Plant information

- Installed PV power: 1,9 MWp
- Installed battery power: 1 MW/580 kWh
- Annual yield: 3,2 GWh
- Diesel generator rating: 4 MVA

SMA System Technology

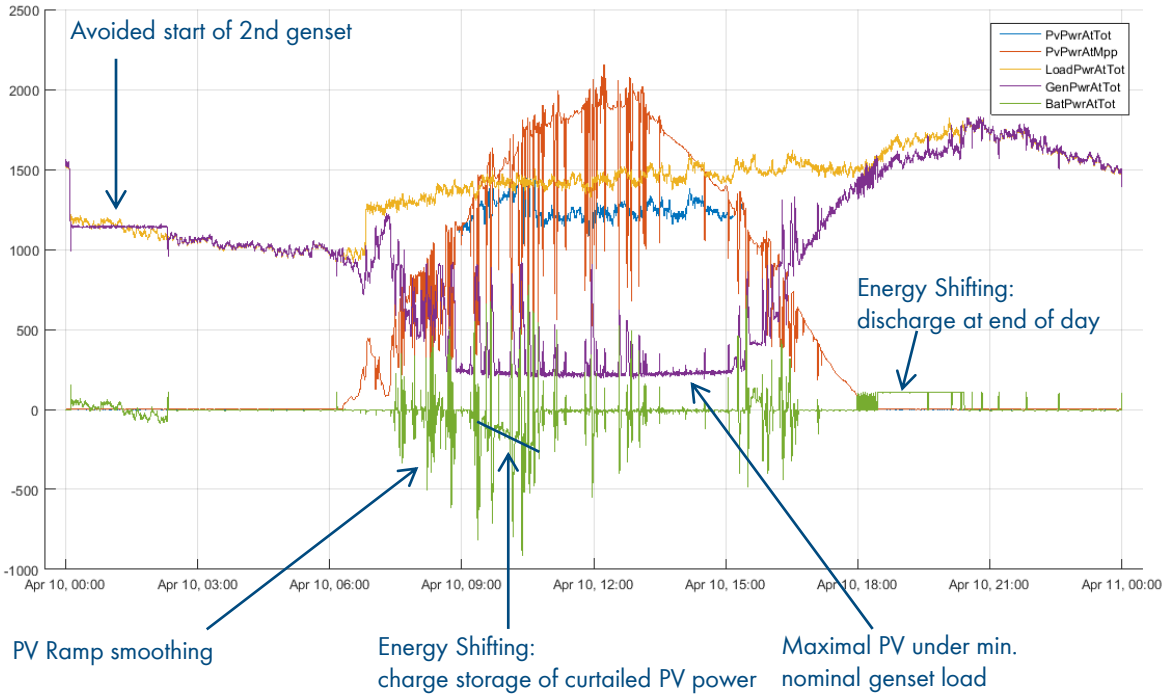
- SMA Fuel Save Solution incorporates the SMA Fuel Save Controller
- 72 SMA Sunny TriPower 25000-TL-30
- 1 SMA Sunny Central Storage SCS 1000

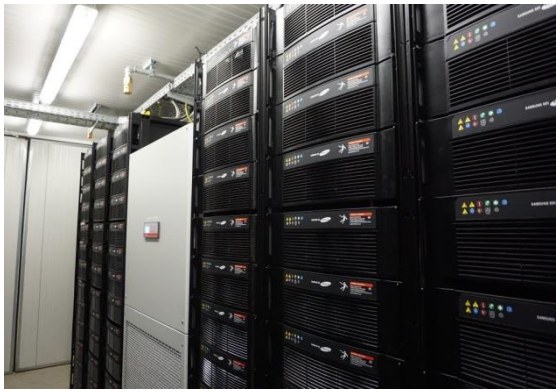
SMA system solutions for hybrid applications

SMA Sunbelt Energy GmbH

Source: SMA project example

LARGE SCALE ISLAND ELECTRIFICATION WITH PV, DIESEL AND STORAGE– ST. EUSTATIUS, NL ANTILLES





"We were looking for fossil fuel reduction and at the same time for a solution with both very low maintenance and also a stand-alone operation", Fred Cuvalay, CEO of Stuco, summarizes the technical challenges. "With the SMA Fuel Save Solution we found a solution exactly tailored to our particular needs. It is very user friendly."

Partner

- End Customer: Stuco, Utility of St. Eustatius
- Installation Partner: Eco Energy, Curacao
- Finance: Dutch Ministry of Economic Affairs

SMA Sunbelt Energy

- Project Specific Monitoring System (Modbus based, graphical User Interface, remote access)
- Containerized Li-Ion Storage Facility with Li-Ion NMC with 2,5C rate
- Network Design

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